

In the Claims

Please substitute the following amended claims for those currently pending:

1. (Currently amended) A thermistor comprising:

a resistance element having upper and lower surfaces and showing a resistance varying characteristics according to the change of temperature;

first and second conductive layers formed on the upper surface of the resistance element, the first and second conductive layers being adjacently engaged to each other with a non-conductive gap interposed therebetween;

first and second electrodes formed on the lower surface of the resistance element and electrically separated from each other;

a first connector conductively electrically connecting the first conductive layer to the first electrode; and

a second connector conductively electrically connecting the second conductive layer to the second electrode,

wherein the first and second conductive layers and the first and second electrodes are arranged so that the first conductive layer and the second electrode face each other and substantially overlap each other with the resistance element interposed therebetween, and the second conductive layer and the first electrode face each other and substantially overlap each other with the resistance element interposed therebetween, and the non-conductive gap has a shape of concave-convex patterns,

wherein the first conductive layer and the first electrode have the same polarity, the second conductive layer and the second electrode have the same polarity, the first conductive layer and the second conductive layer have different polarities, and the first electrode and the second electrode have different polarities,

whereby a current path is formed between the adjacent first and second conductive layers via a region where the non-conductive gap of the resistance element is formed,  
and

wherein the non-conductive gap has a width smaller than a thickness of the resistance element.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Original) A thermistor according to claim 1,

wherein the resistance element is a polymer having a positive temperature coefficient.

6. (Original) A thermistor according to claim 1,

wherein the first and second conductive layers are made of copper or copper alloy.

7. (Original) A thermistor according to claim 1,

wherein the first and second electrodes are made of copper or copper alloy.

8. (Original) A thermistor according to claim 1,

wherein the first connector electrically connects the first conductive layer to the first electrode via one side of the resistance element, while the second connector electrically connects the second conductive layer to the second electrode via the other side of the resistance element.

9. (Original) A thermistor according to claim 1,

wherein the resistance element has through holes at both sides,

wherein the first connector electrically connects the first conductive layer to the first electrode through the through hole at one side of the resistance element, while the second

connector electrically connects the second conductive layer to the second electrode through the through hole at the other side of the resistance element.

10. (Previously presented) A thermistor according to claim 1,  
wherein the shapes of the non-conductive gap is rectangular, triangular, zigzag or waved.

11. (Previously presented) A thermistor according to claim 1,  
wherein the first and second electrodes are adjacently engaged to each other with a non-conductive gap interposed therebetween.

12. (Previously presented) A thermistor according to claim 1,  
wherein, when voltages having opposite polarities are applied to the first electrode and the second electrode,

a current path is formed between the adjacent first and second conductive layers via a region

where the non-conductive gap of the resistance element is formed;

a current path is formed between the adjacent first and second electrodes via a region where

the non-conductive gap of the resistance element is formed;

a current path is formed between the first conductive layer and the second electrode via the resistance element disposed therebetween; and

a current path is formed between the first electrode and the second conductive layer via the resistance element disposed therebetween.

13. (Previously presented) A thermistor according to claim 12,  
wherein, when voltages having opposite polarities are applied to the first electrode and the second electrode,

a current path is formed between a portion of the first connector disposed adjacent the second side of the resistance element and the second conductive layer via a region where the non-conductive gap of the resistance element is formed; and

a current path is formed between a portion of the second connector disposed adjacent the first side of the resistance element and the first conductive layer via a region where the non-conductive gap of the resistance element is formed.

14. (Canceled)